

From: [Mort, Sandra L](#)
To: [Siedlecki, Mary](#)
Cc: [Mccarty, Bud](#)
Subject: RE: Daikin Offsite Residential Indoor Air Evaluation Based on Measured Soil Gas Concentrations
Date: Monday, August 15, 2016 12:47:40 PM
Attachments: [image002.png](#)
[image003.png](#)

Mary –

I have reviewed the risk calculator and the modeled cumulative indoor air risk values for the residential exposure scenario using the preliminary data that utilized the maximum detected chlorinated VOC concentrations in the soil gas data collected in July 2016. It is identified that this data is preliminary and a final risk estimates will include all detected soil gas VOCs when the laboratory reports are made available.

I agree with your assessment that the preliminary chlorinated-VOC data risk values are below the DWM criteria for residential indoor air exposures. This preliminary assessment indicates that vapor intrusion risks above DWM criteria are not indicated for the residential area downgradient of the site and adjacent to the creek. A final risk assessment will be made when the final laboratory data is made available to the HWS. The preliminary and final risk assessment for this soil gas sampling event will remain relevant as long as the groundwater VOC concentrations remain stable and do not increase. Should an increase in groundwater VOC concentration increase, or site conditions that may impact the groundwater VOC concentrations change, then vapor intrusion risks to the residential area may need to be re-evaluated.

Sandy

Sandy Mort

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From: Siedlecki, Mary
Sent: Monday, August 15, 2016 11:24 AM
To: Mort, Sandra L <sandy.mort@ncdenr.gov>
Cc: Mccarty, Bud <bud.mccarty@ncdenr.gov>; Siedlecki, Mary <mary.siedlecki@ncdenr.gov>

Subject: Daikin Offsite Residential Indoor Air Evaluation Based on Measured Soil Gas Concentrations

Sandy – As we discussed in our meeting this morning, I confirmed that each of the screening values Ray Roblin listed in his tabulation is correct. I compared Ray's values against the DWM Residential VI Screening Table (dated March 20116). The screening values are correct and no changes to the tabulation are required.

I inserted the maximum measured concentration for each constituent into the Division VISL CALCULATOR NOV RSL BASED JANUARY 2016 FINAL for a residential scenario. **NOTE:** *cis*-1,2-dichloroethane does not appear in the spreadsheet. As a consequence, the maximum measured concentration for this constituent is NOT included in the final calculation.

The attached spreadsheet calculates cumulative risk/cumulative hazard quotient for the three constituents that were measured in soil gas at concentrations exceeding the method detection limit (including 1,1,1-trichloroethane; trichloroethylene; and 1,2,4-trimethylbenzene). Again, *cis*-1,2-dichloroethane is not included in the risk calculation. The calculated cumulative risk (**3.3E-7**) is less than 1E-4. The hazard quotient (**1.73E-1**) is less than 1. Because the cumulative risk and hazard quotient are not exceeded, there is no further action required on the part of Daikin Applied Americas wrt to offsite residential indoor air. I will forward this information to Daikin under separate cover after you confirm that the data are interpreted correctly.

As agreed, this spreadsheet will be updated to include any other additional constituents of concern that are reported in the final report (pending).

Please let me know if there is anything else you need. Thank you.

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